

## Appendix B

### Frequency Distribution of Ratios by County

Washington has approximately 2.7 million real property parcels. Due to the high volume of assessments, county assessors must use mass appraisal techniques to determine assessed values. Each property has unique characteristics and it is not possible for assessing officials to fully capture the influence of all these characteristics on the market value. As a result, the ratio of assessed value to market value will vary from property to property. Generally, most properties will have similar ratios of assessed to market value. However, some properties will have ratios to market value that differ somewhat from the typical ratio. If most ratios are close to together with a few ratios falling some distance from the center then a picture of the distribution of ratios will look somewhat like the familiar bell curve.

Appendix B contains a frequency distribution of ratios for the state and each county. These frequency distribution charts show the relative number of properties that have ratios within specified intervals. The first chart in Appendix B shows the frequency distribution of ratios on a statewide basis. A chart for each county follows.

The vertical axis on each chart is divided into ratio intervals. Each interval is .05 wide. For example, the bar centered on 0.90 represents properties with ratios between 0.875 and 0.925. The horizontal axis on each chart shows the percentage of properties that fall within the interval. So, the bar labeled 0.90 on the chart for the state distribution indicates that 14.47 percent of the properties have ratios between 0.875 and 0.925.

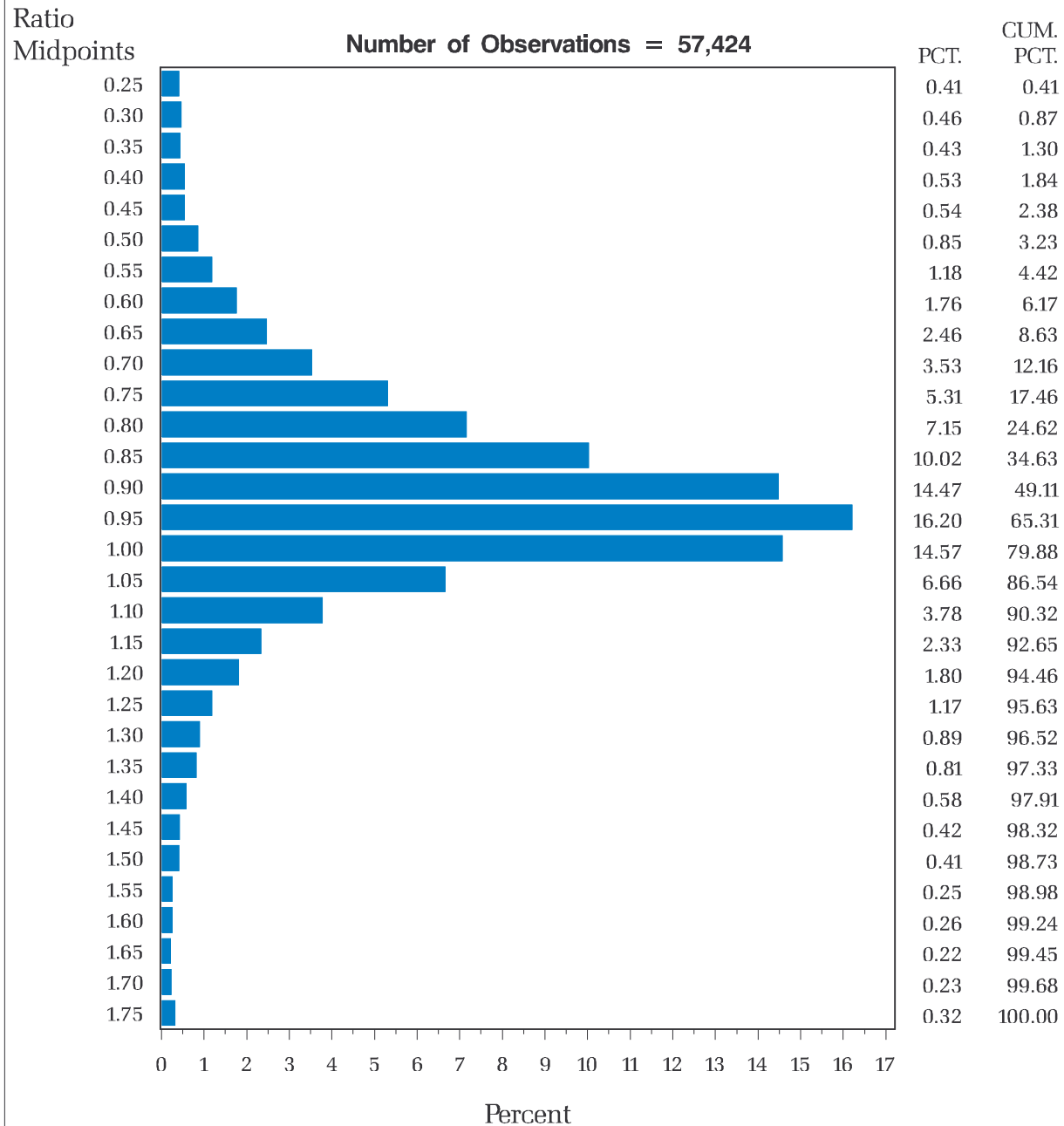
Each chart includes the number of observations in the analysis for each county. The counties with a large number of observations generally have symmetric distributions centered on the median ratio for the county. However, the distributions for the smaller counties are based on many fewer observations. For example, see the distributions for Adams, Asotin, Columbia, Ferry, Garfield, and Wahkiakum Counties. This study is primarily based on property sales and there are few property sales in these counties. Their distributions are not as neat and tidy as those for the larger counties.

These small sample sizes present two problems. First, for purposes of this analysis, a small sample size makes it difficult to tell if a county satisfies or fails to satisfy the IAAO standards when the nominal calculation of the median, coefficient of dispersion, or other statistic is close to the IAAO standard. Second, good arms length sales are the best indication of a property's market value. Appraisers in counties lacking a supply of qualified sales face a significant challenge when estimating market values for all properties in a county.

# 2001 Assessment Year

## Frequency Distribution of Ratio of Assessed Value to Sales Value

### Distribution for the State



The horizontal axis shows the percent of properties that fall within the interval. The vertical axis is divided into intervals. The vertical axis is labeled with the midpoint of each interval — each interval is .05 wide. For example, the interval labeled .90 contains the range 0.875 to 0.925.